

in proportion than in the latter, the intertemporal constriction especially much less marked. Teeth smaller and lighter than in the other species, the distance from the front of the canine to the back of  $m^3$  11.5 mm., as against 12.6 in *moschatus* and 14 in *lepturus*. Anterior breadth of  $m^1$  2.5 mm., 2.9 in *moschatus*, and slightly more in *lepturus*. One minute lower premolar only, as usual in *Scaptochirus*, the condition in the type of *lepturus* being abnormal, as evidenced by other specimens since received from Peking.

Length of hind foot (c. u.) 19.5 mm.; breadth of fore 12.5; tail 16.

Skull: greatest length 30.7; basal length 26; greatest breadth 17.2; intertemporal breadth 7.8; palate length 13; front of canine to back of  $m^3$  11.5.

*Hab.* Ho-tsin, S.W. Shan-si.

*Type.* Adult. B.M. no. 10. 3. 13. 1. Collected November 1909, and presented by Mr. Robert Gillies.

On the discovery that the additional lower tooth of the type of "*Talpa leptura*," which gave it the dental formula of *Parascaptor* and was the primary reason for my description of the species, was an individual abnormality, it was supposed that *lepturus* was only a synonym of *moschatus*. But I have recently had the opportunity of examining the typical skull of the latter in the Paris Museum, and find that it is decidedly smaller than that of *lepturus*, while the comparatively long tail of the latter also distinguishes it. *S. moschatus* was described as from "Chinese Mongolia," and probably comes from somewhere near or beyond Suen-hoa-fu, where David collected the majority of his "Mongolian" animals.

The Ho-tsin mole again would seem to form a third species of the group, slightly smaller than *S. moschatus*, with decidedly smaller teeth and with a tail as long as in the Peking animal.

#### XLVII.—Three new West African Mammals.

By OLDFIELD THOMAS.

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##### *Perodicticus ju-ju*, sp. n.

A grey member of the small-toothed group.

Size, judging by skull, about as in *P. batesi*. Fur close and woolly, much shorter than in *P. ibeanus*. Bristle-hairs

practically absent. General colour above "drab-grey," the other three W. African Pottos being of a more rufous brown colour. Whole of back uniform, without any darker colour on the fore back. Underfur grey at base (grey no. 6), then dull buffy whitish, the ends dark brown; the few longer hairs with light tips, not affecting the general colour. Under surface well defined greyish white, the hairs grey basally, whitish terminally. Outer surface of arms and legs drab-grey like back, inner surface whitish like belly, but becoming more drabby towards wrists and ankles; hands and feet drab-grey above. Tail proportionally rather long, drab-grey.

Skull rather larger than that of *P. potto*; nasals of about the same length, longer than in *P. ibeanus*. Postorbital bar about as in *P. batesi*, broader than in *potto*, narrower than in *ibeanus*.

Teeth small throughout, very much as in *P. ibeanus*, except that  $m^2$  is fully equal in size to  $m^1$ .  $P^2$  similarly two-thirds the height of the canine and longer than the teeth following it, and below the same. (There is an extra premolar on each side above in the type between the anterior premolar and  $p^3$ , but this would certainly appear to be abnormal.) In *P. potto*  $p^2$  is but little larger than  $p^3$  above, and is smaller than it below. The molars are also even smaller.

Dimensions of the type:—

Head and body 355 mm.; tail 75; hind foot 77; ear 25.

Skull: upper length 66; basal length 58; greatest breadth 47; nasals 17; upper cheek-tooth series 17.8; molars only 9; breadth of  $m^2$  4.1.

*Hab.* Southern Nigeria.

*Type.* Adult male. B.M. no. 2. 7. 12. 1. Presented by the Zoological Society, to whom it was given by Edward Straw, Esq. Lived in the Zoological Gardens, May 26th to June 17th, 1902.

The Pottos fall readily into two groups, large-toothed and small-toothed. The former are *P. edwardsi* and *batesi*, the latter *P. potto*, *ibeanus*, and the present form. From *P. ibeanus* *P. ju-ju* is distinguished by its uniform colour and widely different locality; from *P. potto* (of which the Museum contains one almost topotypical specimen) by its drab-grey instead of dark brown colour and by the different proportions of its premolars. The special characters of the Sierra Leone *P. geoffroyi*, Benn., are unknown to me, but it obviously cannot be the same as *P. ju-ju*.

*Tatera guineæ*, sp. n.

Allied to *T. kempi*, Wr., but smaller.

External proportions and colour quite as in *T. kempi*, except that light patches are present behind the eyes and the tail is rather more tufted, the hairs of the tuft 7-8 mm. in length.

Skull in its general shape quite like that of *T. kempi*, but smaller throughout. Posterior palatine foramina lengthened. Bullæ markedly smaller than in *kempi*, larger than in *gracilis*.

Dimensions of the type (measured in the flesh):—

Head and body 160 mm.; tail 172; hind foot 36; ear 21.

Skull: greatest length 38.6; basilar length 29; nasals 15.5; interorbital breadth 6.4; palatilar length 17.6; greatest horizontal diameter of bulla 10; upper molar series 6.5.

*Hab.* Gunmal, Portuguese Guinea. Alt. 50 m.

*Type.* Adult male. Original number 37. Collected 19th July, 1909, by Dr. W. J. Ansorge. Four specimens.

This species is as readily distinguishable from *T. kempi* by its smaller size and smaller bullæ as from *T. gracilis* by its larger size and larger bullæ. The greatest horizontal diameter of the bullæ in the types of the three species is 8.7, 10, and 11 mm. respectively.

*Arvicanthis ansorgei*, sp. n.*A. rufinus* group.

General characters of *A. rufinus* and *occidentalis*\*, size intermediate between the two. Character of fur and colour as in *A. rufinus*, the area round the base of the tail strongly suffused with tawny.

Skull slender, its outlines more like those in the larger *rufinus* than in the smaller broader-skulled *occidentalis*; nasals long and slender, evenly tapering backwards; interorbital region narrow; distance between parietal ridges less than in the smaller *occidentalis*; interparietal very small, narrow antero-posteriorly. Bullæ a little larger than in *occidentalis*, much smaller than in *rufinus*.

Incisors narrow for this group, not even so broad as in the smaller *A. occidentalis*, of which the type is younger than that of *ansorgei*. Molars slightly larger than in *occidentalis*, but all three species, widely as they differ in general size, have the molars of approximately the same dimensions.

\* Cf. Wroughton, Ann. & Mag. Nat. Hist. (7) xvii. pp. 376-377 (1906).

Measurements of the type:—

Head and body 160 mm.; tail 125; hind foot 33; ear 20.

Skull: greatest length 34.5; basilar length 28.2; nasals 13.3 × 4.6; interorbital breadth 4.8; breadth across parietal ridges 11.2; breadth of brain-case 14; palatal foramina 7; diastema 9.2; palatilar length 16; length of bullæ 6.8; upper molar series 6.8.

*Hab.* Gunnal, Portuguese Guinea.

*Type.* Adult male. Original number 49. Collected 28th July, 1909, by Dr. W. J. Ansorge.

XLVIII.—*The Caudal Fin of the Elopidae and of some other Teleostean Fishes.* By C. TATE REGAN, M.A.

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IN the Jurassic and Cretaceous fishes of the family Oligopleuridae (*Oligopleurus*, *Spathiurus*, *Oenoscopus*) the caudal fin was symmetrical in form but structurally heterocercal; the terminal portion of the vertebral column was rather gently inclined upwards, the centra continued right to the bases of the fin-rays, and a notochordal prolongation, perhaps invested with cartilage, separated the epaxial and hypaxial rays, which were sharply differentiated; the series of spinous epaxial rays comprised anterior rays which increased in length backwards, and shorter posterior rays; the former bent forward below and were supported by a few (not more than 4 or 5) basalia, whilst the rest were inserted on the notochord or behind its termination on the uppermost hypaxial ray; the hypurals were numerous and but little expanded.

In the Pholidophoridae the structure appears to have been essentially similar, but the Leptolepidae were different and had a caudal fin like that of the living Elopidae.

In *Elops* (*affinis*, *machnata*, and *lacerta*) and *Megalops* (*atlanticus* and *cyprinoides*) the upturned portion of the vertebral column is shorter and more abruptly inclined upwards than in the Oligopleuridae, and includes only three centra; the last centrum is remote from the bases of the fin-rays, and indeed the notochordal prolongation only separates the lowest epaxial and uppermost hypaxial rays basally, terminating in an opisthural cartilage. The posterior neural arches, crowded together by the abrupt upturning of the vertebral column, have taken on the function of strengthening